

Amendments to the Specification:

Please replace the paragraph beginning at page 4, line 13 with the following amended paragraph:

Korean Unexamined Patent Publication No. ~~2003~~2002-0004065 describes a method of manufacturing partly fluorinated copolymers based on vinyl compounds substituted with trifluorostyrene, and ionic conductive polymer electrolyte membranes made of the same. It is described that electrolytes can be manufactured with a superior mechanical property at low cost and the swelling can be reduced compared with conventional cases. Yet, it does not report that the methanol permeability can be reduced.

Please replace the paragraph beginning at page 5, line 11 with the following amended paragraph:

As a second example of modifying Nafion[®] membranes, some researchers proposed a method producing Nafion[®]/silicon oxide composite membranes via sol-gel reaction using Nafion[®] 115 and tetraethylorthosilicate (TEOS)[D. H. Jung, S. Y. Cho, D. H. Peck, D. R. Shin and J. S. Kim, Journal of Power Sources, ~~4683-1-5 (2002)~~106 (2002) 173-177]. This method showed that the methanol permeability decreases with increasing silicon oxide content in the membrane. In cells using this composite membranes according to said method, the current density was 650 mA/cm² at a cell voltage of 0.5 V and temperature of 120, which is a superior result when compared with other commercial membranes. However, this method has drawbacks that the ionic conductivity is decreased compared with Nafion[®] membranes and the performance is decreased with increasing silicon oxide content more than 12%.

Please replace the paragraph beginning at page 6, line 5 with the following amended paragraph:

As another example, some researches proposed a fabrication method in which a polybenzimidazole layer is formed at the surface of Nafion[®] membrane by screen printing method [L. J. Hobson, Y. Nakano, H. Ozu and S. Hayase, Journal of Power Sources, ~~104,~~ 1(2002)104 (2002) 79-84]. The composite polymer electrolyte membrane via this method was shown to reduce the methanol permeability by 40 to 60 % and the cell performance was improved by 46%. However, the ionic conductivity has been decreased by about 50 % compared with Nafion[®] membranes.

Please replace the paragraph beginning at page 6, line 12 with the following amended paragraph:

Also, another method to manufacture membranes has been proposed, which improved the cell performance by 51%. This method performs a surface treatment by exposing the surface of Nafion[®] membrane in electron beam of $9.2\mu\text{C}/\text{cm}^2$ at 35kV of accelerated voltage [L. J. Hobson, H. Ozu, M. Yamaguchi, and Hayase, Journal of The Electrochemical Society, 148, 10 A1185-A1190 (2001)]. However, this modified membrane does not reduce the methanol crossover as compared with Nafion[®] membrane, and shows a drawback that sulfonic groups on the surface are eliminated to a sizable degree.